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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/854,807	05/14/2001	Fujio Tanaka	1217-010754	8883

7590

08/27/2002

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EXAMINER

CINTINS, IVARS C

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 08/27/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/854,807

Applicant(s)  
Tanaka et al.

Examiner  
Ivars Cintins

Art Unit  
1724



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on May 31, 2002
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 3 6) ☐ Other:

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 2 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Hamilton et al. in view of Kunin et al. As pointed out in the previous Office Action, Hamilton et al. discloses regenerating an ion exchange resin with a downward flow of regenerant solution and subsequently washing this resin in an upward direction; and further teaches alternating service and regeneration cycles for the ion exchange resins. Accordingly, Hamilton et al. discloses the claimed invention with the exception of the use of ultra-pure water to wash the regenerated resin. Kunin et al. teaches washing a regenerated ion exchange resin with ultra-pure water; and it would have been obvious to one of ordinary skill in the art at the time the invention was made to use such ultra-pure water to rinse and/or backwash the regenerated resins of Hamilton et al., in order to minimize contamination of these resins. Applicant should note that the alternate service and regeneration cycles for the ion exchange

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resins in Hamilton et al. will result in "repeating" of the regeneration and rinse steps of claim 1. However, should it be held that the language of claim 1 precludes an intermediate service step between the recited plural regeneration and washing steps, then it would have been obvious to one of ordinary skill in the art at the time the invention was made to subject the ion exchange resins of this modified primary reference to multiple regeneration and washing steps, in order to ensure that these resins are adequately regenerated and washed.

Claims 3 and 4 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Hamilton et al. and Kunin et al. as applied above, and further in view of Saieva. As pointed out in the previous Office Action, the modified primary reference discloses the claimed invention with the exception of the specific material from which the processing equipment is constructed. Saieva discloses employing an ion exchange resin column constructed from a vinyl chloride resin; and it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the column and other parts of the modified primary reference from such a vinyl chloride resin, in order to obtain the advantages associated with this material (e.g. non-corrosive environment, lower construction costs, etc.) for the system of the modified primary reference.

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Applicant's arguments filed May 31, 2002 have been noted and carefully considered but are not deemed to be persuasive of patentability. Initially, it is noted that Applicant has submitted certified English translations of the foreign priority documents, and argues that this removes the Kunin patent as prior art. It is pointed out, however, that the effective prior art date of a U.S. patent is its filing date, not its publication date. Accordingly, Kunin et al. having a filing date of February 10, 2000 is still deemed to be available as prior art, since Applicant's earliest foreign priority document has a filing date of June 21, 2000.

Applicant also argues that the alternating service and regeneration cycles of the Hamilton patent are not equivalent to the repeated cycle recited in the claims, because the repeated cycle presently claimed is carried out before reuse of the ion exchange resin. Again, this argument has been noted and carefully considered, but is not deemed to be persuasive of patentability. It is pointed out that the claims do not preclude a service cycle between individual regeneration and ultra-pure water treatments, i.e. due to the "comprising" language in line 2 of claim 1; and therefore, these claims do not distinguish over the alternating service and regeneration cycles of Hamilton et al. In any event, it would have been obvious to one of ordinary

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skill in the art at the time the invention was made to subject the ion exchange resins of the modified primary reference to multiple regeneration and washing steps, in order to ensure that these resins are adequately regenerated and washed.

Applicant also argues that the Saieva patent does not disclose the recited regeneration procedure. Once again, this argument has been noted and carefully considered, but is not deemed to be persuasive of patentability. It is pointed out that Saieva is only relied upon for its teaching of constructing an ion exchange column and other parts from a vinyl chloride resin, thereby providing the motivation to construct the ion exchange column and other parts of the modified primary reference system from a similar material, and not for any specific regeneration technique.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire

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on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to I. Cintins whose telephone number is (703) 308-3840. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM.

The fax phone numbers for this art unit are: (703) 872-9311 for "Official" faxes after Final Rejection; (703) 872-9310 for all other "Official" faxes; and (703) 872-9492 for "Draft" and other "Unofficial" faxes.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

*Ivars Cintins*  
**Ivars C. Cintins**  
**Primary Examiner**  
**Art Unit 1724**

I. Cintins  
August 25, 2002